

ABSTRACT

A method for controlling a structure of a nano-scale substance, which comprises irradiating a mixture of low-dimensional quantum structures having a nano-scale with an electromagnetic wave in an oxygen atmosphere, to thereby selectively oxidize a low-dimensional quantum structure having a density of states resonating with the electromagnetic wave used for the irradiation. The method allows a low-dimensional quantum structure having a specific structure to be selectively disappeared from the mixture of low-dimensional quantum structures having a nano-scale.